seal between adjacent components without the requirement of a gasket. Further, the geometry of the components minimizes relative movement between the components as the pressure within the assembly 100 cycles.

Please replace the paragraph beginning at page 4, line 14, with the following rewritten paragraph:

In the illustrated embodiment, the engagement portion 108 of the check valve 102, the mouths 110/114 on the vessel 104, and the engagement portion 112 on the plug 106 are all radially symmetric with respect to a radial axis "r" extending along the length of the assembly 100. During operation, the components of the assembly 100 are compressed in the axial direction "r" to form the subject seals. One of the adjacent components has a tapered female mouth and the other component has a complementary tapered male mouth, each of the mouths having a mating portion for contacting the other component. One of the mating portions has a substantially linear cross-sectional profile, while the other has a convex, curved cross-sectional profile.

Please add, beginning at page 5, between lines 20 and 21, the following new paragraph:

The inventors also appreciate that either or both of the fittings in the illustrated embodiment can have an engagement portion with a linear cross-sectional profile and the vessel have a mouth with a convex, curved cross-sectional profile.

In the Claims:

Please cancel claims 13, 16 and 18-20.

Please add claim 26.

Please amend claims 1-12, 14, 15 17, 21, 24 and 25 to read as follows (all claims are provided for convenience):

1. (Amended) A pair of adjacent components from a containment system for fluids at pressures in excess of 15,000 psi, providing a seal between the adjacent components of

like material without the need for an insert therebetween, the adjacent components being aligned along a coupling axis, the pair of adjacent components comprising:

a tapered female mouth integrally formed on one of the adjacent components, the tapered female mouth having a female mating portion; and

a tapered male mouth integrally formed on the other of the adjacent components, the tapered male mouth having a male mating portion sized to contact the female mating portion; wherein

one of the male and female mating portions has a substantially linear cross-sectional profile, the linear cross-sectional profile being angled between 40 and 68 degrees from the coupling axis; and

the other of the male and female mating portions has a convex, curved cross-sectional profile, the curved cross-sectional profile contacting the linear cross-sectional profile in a substantially circular seal.

2. (Amended) The pair of adjacent components of claim 1 wherein the linear cross-sectional profile is on the tapered female mouth and the curved cross-sectional profile is on the tapered male mouth.

3. (Amended) The pair of adjacent components of claim 1 wherein the linear cross-sectional profile is angled between 50 and 59 degrees from the coupling axis.

4. (Amended) The pair of adjacent components of claim 1 wherein the linear cross-sectional profile is angled approximately 54 degrees from the coupling axis.

5. (Amended) The pair of adjacent components of claim 1 wherein the curved cross-sectional profile is substantially arcuately shaped.

6. (Amended) The pair of adjacent components of claim 1 wherein the curved cross-sectional profile is substantially elliptically shaped.

7. (Amended) The pair of adjacent components of claim 1 wherein the tapered female mouth is radially symmetric about the coupling axis.

8. (Amended) The pair of adjacent components of claim 1 wherein the tapered male mouth is radially symmetric about the coupling axis.

9. (Amended) A fitting for sealing a fluid at a pressure greater than or equal to 15,000 psi between the fitting and a vessel, without requiring an insert therebetween, the vessel having a vessel bore extending along a longitudinal axis, the vessel bore terminating in a tapered mouth for engaging the fitting, the tapered mouth being radially symmetric about the longitudinal axis and comprising a metallic material for contacting the fitting, the fitting comprising:

a fitting bore extending along a radial axis and terminating in a tapered engagement portion, the tapered engagement portion being radially symmetric about the radial axis, the tapered engagement portion being sized and shaped to sealingly contact the tapered mouth when the longitudinal axis is aligned with the radial axis and the fitting is urged against the vessel, a contact region between the vessel and the fitting forming a circular seal that is radially symmetric about both the longitudinal axis and the radial axis, the circular seal having a tangential contact angle measuring between 40 and 68 degrees from the longitudinal and radial axes.

10. (Amended) The fitting of claim 9 wherein the tapered engagement portion has a convex, curved cross-sectional profile for engagement with the tapered mouth having a linear cross-sectional profile.

11. (Amended) The fitting of claim 9 wherein the tapered engagement portion has a convex, curved cross-sectional profile for engagement with the tapered mouth having a linear cross-sectional profile, the curved cross-sectional profile being substantially arcuately shaped.

12. (Amended) The fitting of claim 9 wherein the tapered engagement portion has a convex, curved cross-sectional profile for engagement with the tapered mouth having a linear cross-sectional profile, the curved cross-sectional profile being substantially elliptically shaped.

13. (Canceled)

14. (Amended) The fitting of claim 9 wherein the contact angle measures between 50 and 59 degrees from the longitudinal and radial axes.

15. (Amended) The fitting of claim 9 wherein the tangential contact angle measures approximately 54 degrees from the longitudinal and radial axes.

16. (Canceled)

17. (Amended) A vessel formed of a metallic material for containing a fluid at a pressure greater than or equal to 15,000 psi, the vessel being sealed by a fitting of a like metallic material, without requiring an insert therebetween, the fitting having a first tapered engagement portion for engaging the vessel along a coupling axis, the vessel comprising:

a second tapered engagement portion shaped to sealingly contact the tapered mouth in a circular seal, the circular seal having a tangential contact angle measuring between 40 and 68 degrees from the coupling axis.

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Amended) The vessel of claim 17 wherein the second tapered engagement portion has a linear cross-sectional profile for engagement with the first tapered engagement portion having a convex, curved cross-sectional profile.

22. The vessel of claim 17 wherein the tangential contact angle is between 50 and 59 degrees from the coupling axis.

23. The vessel of claim 17 wherein the tangential contact angle is approximately 54 degrees from the coupling axis.

24. (Amended) The vessel of claim 17 wherein the second tapered engagement portion is radially symmetric with respect to the coupling axis.

25. (Amended) A method for forming a fluid-tight seal in an ultrahigh pressure fluid containment system, without the need for a gasket or other insert, the method comprising:

providing a first component with a first tapered engagement portion having a linear cross-sectional profile, the first engagement portion being symmetrical about a longitudinal axis of the first component, the linear cross-sectional profile being angled between 40 and 68 degress from the longitudinal axis;

abutting a second component having a second tapered engagement portion against the first component with the respective tapered engagement portions in contact with each other, the second tapered engagement portion having a curved cross-sectional profile such that the contacting surface between the components is circular having a tangential contact angle measuring between 40 and 68 degrees from the longitudinal axis; and

urging the first and second components against each other.

26. (New) A method for forming a fluid-tight seal in an ultrahigh pressure fluid containment system, without the need for a gasket or other insert, the method comprising: